

Notice of Allowability

Application No.

10/600,626

Examiner

Demetrius R. Pretlow

Applicant(s)

LAWRENCE ET AL.

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2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed March 13, 2006.
2. ☒ The allowed claim(s) is/are 1,4-6,8-10,12 and 14-17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Allowable Subject Matter

Claims 1,4-6,8-10,12,14-17 are allowed.

The primary reason for the allowance of claims 1,4 and 5 is the inclusion of the limitations of an analyzer interfaced with the decompression engine and operable to analyze the de compressed test data to determine the test data source of an electronic device error response, the analyzer-further operable to generate a test program that reduces the empty cycles of the test data. It is these limitations found in each of the claims, as they are **claimed in the combination**, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 6-8 is the inclusion of the limitations of an a compression engine in communication with the capture interface and operable to compress the test data, the compression engine comprising a compressor and a reformater, the compressor having plural comparison modules, each comparison module having a width adapted for comparing data field, address or control information and a depth for comparing predetermined cycles of test vectors, the comparison modules operable to represent test vectors having matching data field address or control information with a representation having a reduced size to output compressed vectors having variable lengths, the reformater interfaced with the comparison modules and operable to reformat the compressed vectors of the comparison modules as

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concatenated words of similar length; It is these limitations found in each of the claims, as they are **claimed in the combination**, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claim 9 is the inclusion of the limitations of an is the inclusion of the limitations of an wherein the memory further comprises plural memory motherboards; a memory parser associated with each memory motherboard; plural memory controllers associated with each memory parser; and plural memory storage devices associated with each memory controller; wherein the memory parser coordinates with its associated memory controllers to store test data on plural memory storage devices in sequence so that the memory storage devices operate on a lower clock speed than the test data generation clock speed. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 10,12 and 14 is the inclusion of the method step of compressing the captured test data by comparing the data field. address and control information of a vector with the data field. address and control information of a predetermined number of previous vectors to identify matches in one or more of the data field, address and control information and by representing matches with defined opcodes that reduce the size of the vector; It is this step found in each of the claims, as it is **claimed in the combination**, that has not been found, taught or

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suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claim 15 is the inclusion of the method steps of wherein storing the compressed test data further comprises coordinating storage of the test data in plural storage devices so that the storage devices operate at a slower clock speed than the clock speed associated with the generation of the test data. It is this step found in each of the claims, as it is **claimed in the combination**, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 16-17 is the inclusion of the method step of de-compressing the compressed test data to replay the test data applied to the electronic device; and passing the replayed test data through a logic analyzer to determine the applied test data that generated an error response. It is these steps found in each of the claims, as it is **claimed in the combination**, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetrius R. Pretlow whose telephone number is (571) 272-2278. The examiner can normally be reached on Mon.-Fri. 8-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Demetrius R. Pretlow

 5/18/06

Patent Examiner

BRYAN BUI
PRIMARY EXAMINER

